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| **MAFS.912.F-IF.3.7a, b, c, d, and e.** |

Graph functions expressed symbolically and show key features of the graph by hand in simple cases and using technology for more complicated cases.

a. Graph linear and quadratic functions and show intercepts, maxima, and minima.

b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.

c. Graph polynomial functions, identifying zeros when suitable factorizations are available and showing end behavior.

d. Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available and showing end behavior.

e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude and using phase shift.

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| We recommend using Geogebra.org to complete this graphing problem.  |
| **Item Type**  |
| **GRID: Graphing**  |
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